

**Notice of Allowability**

Application No.

10/727,171

Applicant(s)

MIZUNO ET AL.

Examiner

Art Unit

James D. Stein

2874

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the RCE filed on 04/03/06.2.  The allowed claim(s) is/are 57-96.3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).a)  All    b)  Some\*    c)  None    of the:1.  Certified copies of the priority documents have been received.2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

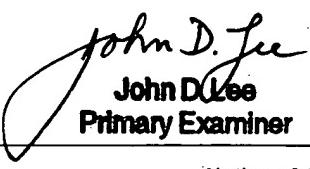
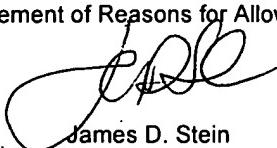
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.5.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 0406
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

  
John D. Lee  
Primary Examiner  
James D. Stein  
Patent Examiner, AU 2874

## DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/03/06 has been entered. Claims 1-56 have been cancelled and new claims 57-97 have been added. Claims 57-97 are pending in the application.

### *Allowable Subject Matter*

Claims 57-97 are allowed.

The following is an examiner's statement of reasons for allowance: With regard to independent claims <sup>57</sup>~~56~~ and 91, none of the cited prior art discloses or suggests the optical multiplexing/demultiplexing device previously claimed wherein a phase-generating device disposed between two MUX/DMUX devices generates a wavelength dependent phase/optical frequency dependent phase with respect to a wavelength of light over a whole passband comprising a plurality of individual passbands, the phase setting a wavelength period between centers of adjacent passbands which are located on a wavelength-domain grid/optical frequency domain grid.

The most relevant prior art, the Takiguchi reference of record, discloses one or more optical multiplexing devices and at least one optical delay line interposed between each of the optical multiplexing devices. However, Takiguchi does not further disclose a phase generating device which generates a wavelength dependent phase/optical frequency dependent phase with

respect to a wavelength of light over a whole passband comprising a plurality of individual passbands, the phase setting a wavelength period between centers of adjacent passbands which are located on a wavelength-domain grid/optical frequency domain grid. Applicant has discovered that these features allow setting the optical frequency period and the central optical frequency of the MUX device simultaneously, thereby mitigating the problem of deteriorating optical transmission characteristics associated with the prior art. One of ordinary skill in the art would not have found it obvious to modify Takiguchi to achieve this functionality, as there is no suggestion in the prior art that it would be advantageous in any way. Therefore, the claimed invention is patentably distinct from the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

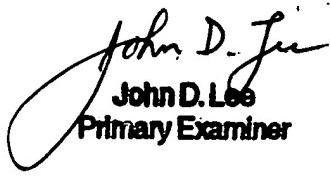
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 2874

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein  
Patent Examiner, AU 2874



John D. Lee  
Primary Examiner